

Amendments to Specification:

Please replace the paragraph beginning at page 1, Line 10 with the following paragraph:

This application claims priority of United States Provisional Patent Application Number 60/414,750 (Attorney Docket No. KLA1P068P/P9966P), filed 27 September 2002, which application is incorporated herein by reference in its entirety for all purposes. This application is filed concurrently with and related to the following patent application: United States Nonprovisional Application Number: 10/672,298 (Attorney Docket No. KLA1P067), entitled “METHOD AND APPARATUS USING INTERFEROMETRIC METROLOGY FOR HIGH ASPECT RATIO INSPECTION” naming Hwang et al. as inventors. The above-referenced United States Patent Application is incorporated herein by reference in its entirety for all purposes.

Please replace the paragraph beginning at page 3, Line 5 with the following paragraph:

As described in United States Nonprovisional Application Number: 10/672,298 (Attorney Docket No. KLA1P067), entitled “METHOD AND APPARATUS USING INTERFEROMETRIC METROLOGY FOR HIGH ASPECT RATIO INSPECTION” naming Hwang et al. as inventors, submitted by at least one of the same inventors of the present invention, phase based techniques and inspection systems are capable of identifying subtle defects, i.e., defects which have very little intensity. But phase measurement is not suitable for detecting all defects. Conventional intensity based inspection systems, for example, are more efficient in identifying many defects such as, large defects or other defects producing a large intensity signal. Phase based inspection techniques are especially suitable for small, subtle defects but aren't ideal in the presence of a signal having a strong intensity. Phase measurements in such an application will create an abundance of problems. A large defect may yield only a small phase defect signal. Phase repeats every cycle (i.e., every angular change of 2π radians), thus an optical path difference exceeding one cycle may show up as only a small phase

difference. Moreover, in identifying such defects, intensity based systems have lower throughputs and are more sensitive to pattern noise.

Please replace the paragraph beginning at page 13, Line 21 with the following paragraph:

The present invention uses techniques disclosed in the currently pending United States Nonprovisional Application Number: 10/672,298 (Attorney Docket No. KLA1P067), entitled “METHOD AND APPARATUS USING INTERFEROMETRIC METROLOGY FOR HIGH ASPECT RATIO INSPECTION”, naming Hwang et al. as inventors, to construct a tool having a superset capability for detecting the defects on a wafer. By combining microscopic intensity based type inspection and interferometric inspection on one platform, benefits from the speed of the microscopic intensity based imaging systems and the sensitivity of the interferometric type measurement can be combined.

Please replace the paragraph beginning at page 15, Line 19 with the following paragraph:

FIG. 10 is a block diagram of an inspection system 1000 using intensity based microscopy and interferometry inspection in accordance with one embodiment of the present invention. As shown, illumination for the inspection system 1000 is generated in a switchable illumination module 1010. This embodiment of the present invention may be implemented with any suitable illumination source or sources configured to generate a brightfield illumination beam for intensity based inspection and a coherent illumination beam (e.g., a laser) for phase based inspection. For example, the brightfield illumination may be provided by a white light lamp. The coherent illumination source may include any source having sufficient spatial coherence ~~et to~~ form spatial interference fringes using the configuration of the system. For example, a deep ultraviolet laser is suitable. A phase based illumination beam 1012 and microscopic intensity based inspection illumination beam 1014 are shown generated.

Please replace the paragraph beginning at page 38, Line 11 with the following paragraph:

In a further example, the inspection ~~subsystem~~ subsystem 360 may be arranged to include an illumination beam 308 generated from a coherent illumination source, and the beam splitter 305 having a special coating designed to reflect a spectral band from the coherent source along the optical path towards the wafer 346 and to permit all other spectral bands in the illumination beam 308 to pass through to the reference module 314. A dichroic surface 316 is placed in this second optical path to serve as a reference mirror for implementing a first operational mode of topographic metrology as described U.S. Patent No. 4,818,110, which is incorporated by reference herein. However, in one embodiment of the present invention, a complex field inspection may be performed in a second operational mode by selecting the illumination source such that, the reference beam passes through the dichroic surface 316 without reflection.

Please replace the paragraph beginning at page 44, Line 18 with the following paragraph:

Once depolarization occurs, the complex field information for that portion cannot be determined. That is, depolarization leadsto the reduction in fringe visibility. But, the complex field information, generally designed to discern subtle deflects, is unnecessary in the presence of such information indicating a large defect. If fringe modulation is noted, the processing block identifies the areas as containing a defect. The matching of measured fringe modulations to known fringe modulation patterns may take place in post-data processing block 340 (See FIG. 3A), similar to the pattern matching performed with phase difference measurements as described further above with respect to FIG. 3A. Processing as to the portions of the wafer showing no defects continues.